

### **REMARKS**

This responds to the Final Office Action dated November 17, 2009.

Claims 1 and 18 are amended, claims 2-6, 19-25 are canceled, and no claims are added; as a result, claims 1, 7-18 and 26-30 remain pending in this application. Support for the amendments may be found throughout the specification, and at least at paragraphs [0036] – [0045]. Applicant believes that no new matter has been introduced with the amendments.

#### **The Rejection of Claims Under § 103**

Claims 1, 18, and 19 were rejected under 35 U.S.C. § 103(a) as being obvious over Simsic et al. (U.S. 6,269,484 B1, hereinafter “Simsic”) in view of Johnson et al. (“Frequency Scalable Video Coding Using MDCT, IEE, Pages V-477-V480, 1994, hereinafter “Johnson”). The determination of obviousness under 35 U.S.C. § 103 is a legal conclusion based on factual evidence. *See Princeton Biochemicals, Inc. v. Beckman Coulter, Inc.*, 411 F.3d 1332, 1336-37 (Fed.Cir. 2005). The legal conclusion that a claim is obvious within § 103(a) depends on at least four underlying factual issues set forth in *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17, 86 S.Ct. 684, 15 L.Ed.2d 545 (1966). The underlying factual issues set forth in *Graham* are as follows: (1) the scope and content of the prior art; (2) differences between the prior art and the claims at issue; (3) the level of ordinary skill in the pertinent art; and (4) evaluation of any relevant secondary considerations.

The Examiner has the burden under 35 U.S.C. § 103 to establish a *prima facie* case of obviousness. *In re Fine*, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir.1988). To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested, by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974); M.P.E.P. § 2143.03. "All words in a claim must be considered in judging the patentability of that claim against the prior art." *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970); M.P.E.P. § 2143.03. As part of establishing a *prima facie* case of obviousness, the Examiner's analysis must show that some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead an individual to combine the relevant teaching of the references. *Id.* To facilitate review, this analysis should be made

explicit. *KSR Int'l v. Teleflex Inc., et al.*, 127 S.Ct. 1727; 167 L.Ed 2d 705; 82 USPQ2d 1385 (2007) (citing *In re Kahn*, 441 F. 3d 977, 988 (Fed. Cir. 2006)). Applicant respectfully traverses the rejection in view of the differences between the claims and the combination of Simsic and Johnson.

For example, claim 1 as amended recites “upon determining by the decoder/deinterlacer that the prediction error energy exceeds an energy threshold or upon determining that a quantization scale factor exceeds a dequantization threshold, generating by the decoder/deinterlacer an updated motion compensation vector.” Claim 18 recites similar language. Applicant respectfully submits that neither Simsic nor Johnson disclose a deinterlacer/decoder that generates an updated motion compensation vector. Generation of motion compensation vectors has heretofore been a function of the encoder. The Office Action states at page 2, paragraph 1:

A decoder is configured as a companion to an encoder to perform the inverse processes of the encoder. Where the encoder acts as a blueprint for the decoding process. Johnson explicitly states that the scaled version of the signal is to be decoded [pg V-479 4. Frequency Scalable Video Coding, ¶ 1,3-4 and 6] Suggesting and teaching the implementation of such operations within a decoder. (emphasis added)

Thus even if an encoder may be considered to provide a blueprint for a decoding process, as correctly stated in the Office Action, that blueprint is the inverse of the encoder. Thus it is counterintuitive and therefore non-obvious to include actions in the decoder that are not an inverse to the encoder. It is counterintuitive and therefore nonobvious to include “generating an updated motion compensation vector” in a decoder. Applicant notes that in determining the differences between the prior art and the claims, the question under 35 U.S.C. 103 is not whether the differences themselves would have been obvious, but whether the claimed invention as a whole would have been obvious. *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 218 USPQ 871 (Fed. Cir. 1983); *Schenck v. Nortron Corp.*, 713 F.2d 782, 218 USPQ 698 (Fed. Cir. 1983); *Interconnect Planning Corp. v. Feil*, 774 F.2d 1132, 1143, 227 USPQ 543, 551 (Fed. Cir. 1985); MPEP § 2141.02. When considered as a whole, a decoder that generates motion compensation vectors is nonobvious.

Claims 1 and 18 further recite a conditional deinterlacing of blocks, “wherein the deinterlacing of the at least one of the blocks of the number of blocks is based on the at least one

motion compensation vector included in the compressed video stream if the prediction error energy for the at least one motion compensation vector is less than the energy threshold and the quantization scale factor is less than the dequantization threshold, and wherein the deinterlacing of the at least one of the number of blocks is based on the updated motion compensation vector if the prediction error energy exceeds the energy threshold or the quantization scale factor exceeds the dequantization threshold.” Applicant respectfully submits that neither Simsic nor Johnson disclose deinterlacing blocks by choosing a motion compensation vector (e.g., the motion compensation vector included in the received stream or the updated motion compensation vector generated by the decoder/deinterlacer) based on an energy threshold and dequantization factor.

In view of the above, claims 1 and 18 recite elements that are not found in either Simsic or Johnson. Therefore there are differences between claims 1 and 18 and the cited combination. As a result, claims 1 and 18 are not obvious in view of the combination of Simsic and Johnson. Applicant respectfully request reconsideration and the withdrawal of the rejection of claims 1 and 18.

Claims 3 and 21 were rejected under 35 U.S.C. § 103(a) as being obvious over Simsic in view of Johnson in and further in view of Zeng (U.S. 7,203,234 B1, hereinafter “Zeng”). Claims 3 and 21 have been canceled in this response, therefore the rejection is believed moot.

Claims 14-16 were rejected under 35 U.S.C. § 103(a) as being obvious over Simsic et al. (U.S. 6,269,484 B1) in view of Zeng (U.S. 7,203,234 B1) further in view of Sarkijarvi et al. (U.S. 2005/0175099, hereinafter “Sarkijarvi”). Claim 14 recites that “the de-quantization threshold varies based on a type of the compressed video stream.” The Office Action correctly states that Simsic and Zeng do not disclose the recited language. However, the Office Action goes on to state that Sarkijarvi, at FIG. 4 and at paragraphs [0044] and [0047] discloses the recited language. Applicant respectfully disagrees with this interpretation of Sarkijarvi. First, Fig. 4 does not disclose anything related to a type of compressed stream. FIG. 4 merely discloses a “intra/inter” selector. An inter/intra coded block is not a “type of compressed video stream”, rather it is an encoding within a stream.

Additionally, paragraph [0044] of Sarkijarvi does not disclose anything related to a de-quantization threshold. Paragraph [0047] of Sarkijarvi does not disclose anything related to a de-quantization threshold. However, paragraph [0047] does disclose that thresholds related to

residue energy or motion vector variance “thresholds can be dynamically adjusted by the bit rate of the output data and/or desired video quality.” However, neither the bit rate of the output data nor the desired video quality is a “type of compressed video stream” as recited in claim 14.

For the above reasons, the combination of Simsic, Zeng and Sarkijarvi fails to disclose all elements of claims 14. Therefore claims 14 is not obvious in view of the differences between the claim and the cited combination. Claims 15-17 inherit the elements of claim 14 and are therefore not obvious for a least the same reasons as claim 14. Applicant respectfully requests reconsideration and the withdrawal of the rejection of claims 14-17.

Claims 7-9 and 12 were rejected under 35 U.S.C. § 103(a) as being obvious over Simsic in view of Zeng in view of Beattie (U.S. 2001/0002205 A1, hereinafter “Beattie”) further in view of Sarkijarvi. Claim 7, recites that “the energy threshold varies according to a type of video associated with the block.” The Office Action correctly states that Simsic and Zeng do not disclose the recited language. Further, Applicant has reviewed Beattie and can find no disclosure of the recited language. The Office Action states that Sarkijarvi, at FIG. 4 and at paragraphs [0044] and [0047] discloses the recited language. As discussed above, Sarkijarvi discloses that “thresholds can be dynamically adjusted by the bit rate of the output data and/or desired video quality.” Again, the output data and the desired video quality are not a “type of video associated with the block” as recited in claim 7. Thus none of Simsic, Zeng, Beattie or Sarkijarvi disclose all of the elements of claim 7. Therefore claim 7 is not obvious in view of the differences between claim 7 and the combination of Simsic, Zeng, Beattie and Sarkijarvi. Claims 8-9 and 12 inherit the elements of claim 7, and are therefore not obvious for at least the same reasons as claim 7. Applicant respectfully requests reconsideration and the withdrawal of the rejection of claims 7-9 and 12.

Claims 10 and 11 were rejected under 35 U.S.C. § 103(a) as being obvious over Simsic in view of Zeng in view of Beattie further in view of Sarkijarvi in further view of Barrau (U.S. 6,968,007 B2, hereinafter “Barrau”). Claims 10 and 11 depend from claim 7 and therefore inherit the recitation that “the energy threshold varies according to a type of video associated with the block.” As discussed above, Simsic, Zeng, Beattie and Sarkijarvi fail to disclose that the energy threshold varies according to a type of video associated with the block. Applicant has reviewed Barrau and can find not disclosure that an energy threshold varies according to a type

of video associated with the block. As a result, the combination of Simsic, Zeng, Beattie and Sarkijarvi with Barrau fails to disclose all of the elements of claims 10 and 11, including elements inherited from claim 7. Therefore claims 10 and 11 are not obvious in view of the combination of Simsic, Zeng, Beattie and Sarkijarvi with Barrau.

Claim 13 was rejected under 35 U.S.C. § 103(a) as being obvious over Simsic in view of Zeng in view of Beattie in view of Sarkijarvi and further in view of Johnson.

Claim 17 was rejected under 35 U.S.C. § 103(a) as being obvious over Simsic in view of Zeng in view of Sarkijarvi and further in view of Johnson.

Claims 26-27 were rejected under 35 U.S.C. § 103(a) as being obvious over Simsic in view of in view of Beattie further in view of Sarkijarvi.

Claim 28 was rejected under 35 U.S.C. § 103(a) as being obvious over Simsic in view of Beattie in view of Sarkijarvi and further in view of Zeng.

Claim 29 was rejected under 35 U.S.C. § 103(a) as being obvious over Simsic in view of Beattie in view of Sarkijarvi further in view of Johnson.

Claim 30 was rejected under 35 U.S.C. § 103(a) as being obvious over Simsic in view of Johnson, in view of Zeng and further in view of Sarkijarvi.

Each of claims 13, 17, 26-29 and 30, either directly or through inheritance, recites that an energy or de-quantization threshold varies based on a type of video or compressed video stream. As discussed above, none of Simsic, Beattie, Sarkijarvi, Zeng or Beattie disclose such subject matter. Further, Applicant has reviewed Johnson and can find no such disclosure. Therefore claims 13, 17, 26-29 and 30 are not obvious in view of any combination of Simsic, Beattie, Sarkijarvi, Zeng, Beattie or Johnson.

**CONCLUSION**

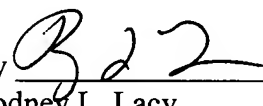
Applicants respectfully submit that the claims are in condition for allowance, and notification to that effect is earnestly requested. The Examiner is invited to telephone the undersigned at (612) 373-6954 to facilitate prosecution of this application.

If necessary, please charge any additional fees or deficiencies, or credit any overpayments to Deposit Account No. 19-0743.

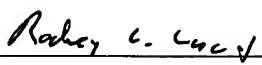
Respectfully submitted,

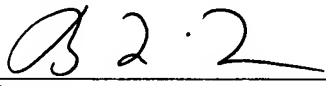
SCHWEGMAN, LUNDBERG & WOESSNER, P.A.  
P.O. Box 2938  
Minneapolis, MN 55402--0938  
(612) 373-6954

Date May 17, 2010

By   
Rodney L. Lacy  
Reg. No. 41,136

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